

THE AGONY & ECSTASY OF ALEXANDER SHULGIN



BLOOD, SWEAT AND SEROTONIN: THE MASTER CHEMIST
OF THE PSYCHEDELIC MOVEMENT AND HIS 40-YEAR
BATTLE WITH THE GOVERNMENT

BY MARK BOAL

PROLOGUE: THE INVASION

Our story of the professor who gave the world ecstasy begins on the morning of June 2, 1994, in the hills above Berkeley, California, where Alexander Shulgin and his wife, Ann, were relaxing at home. At three minutes past nine, their tranquility was shattered by the roar of several police cars and a fire engine racing up their winding dirt driveway. Dozens of armed men and women jumped from the vehicles, their jackets marked SHERIFF'S DEPARTMENT, STATE NARCOTICS, DEA.

The officers proceeded to tear through the Shulgins' closets and drawers and then dug up the sump. Finally, in a backyard shed, behind a rusty padlock, they found what they were looking for: Inside the dim, musty interior they saw rows and rows of glass vials containing pristine white powders and faintly yellow liquids. It was a trove of illegal drugs—nearly all the psychedelics in the pharmacopoeia—more than enough to send the average dealer to prison on multiple life sentences.

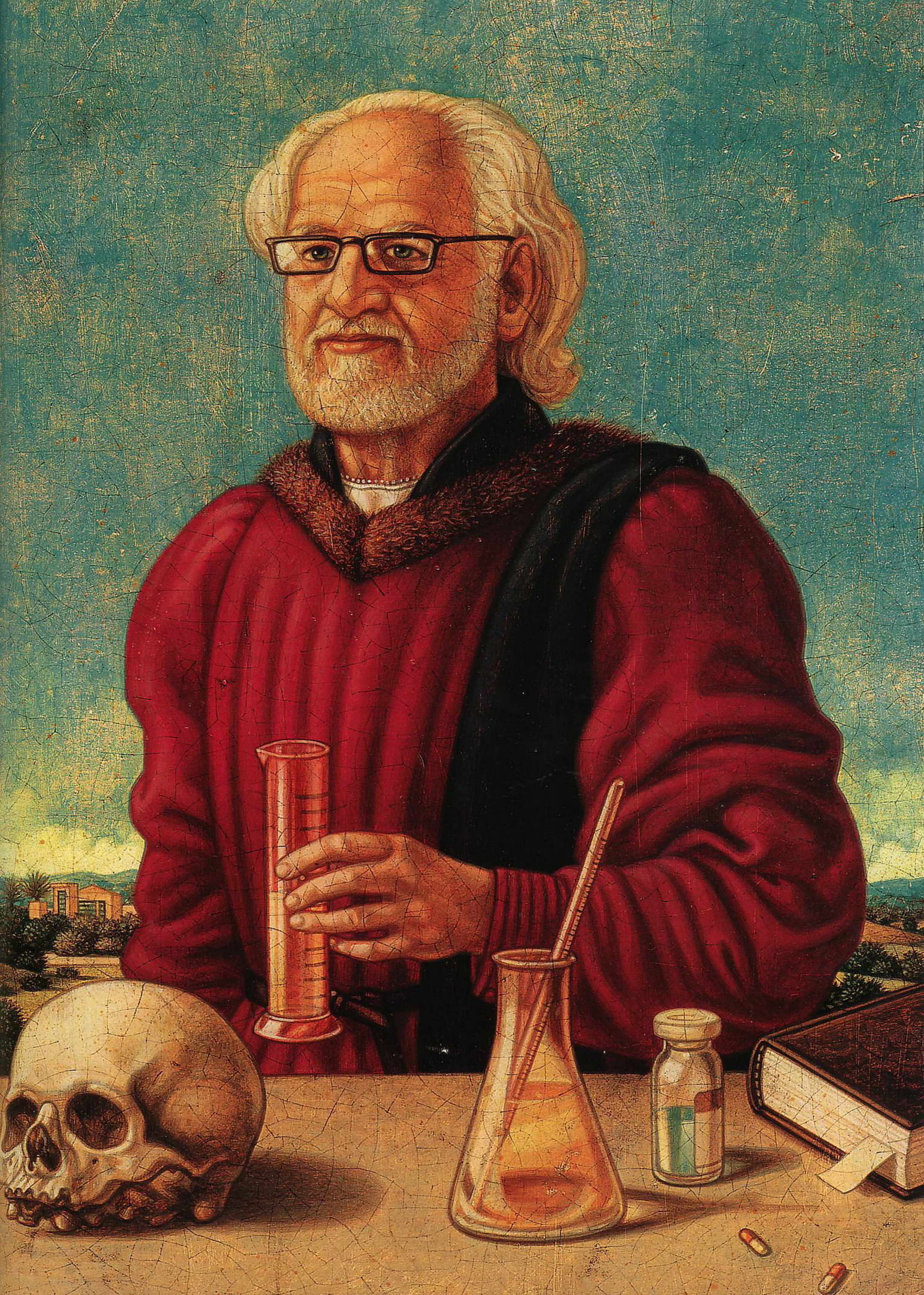
But Dr. Shulgin was not arrested, nor was he charged with

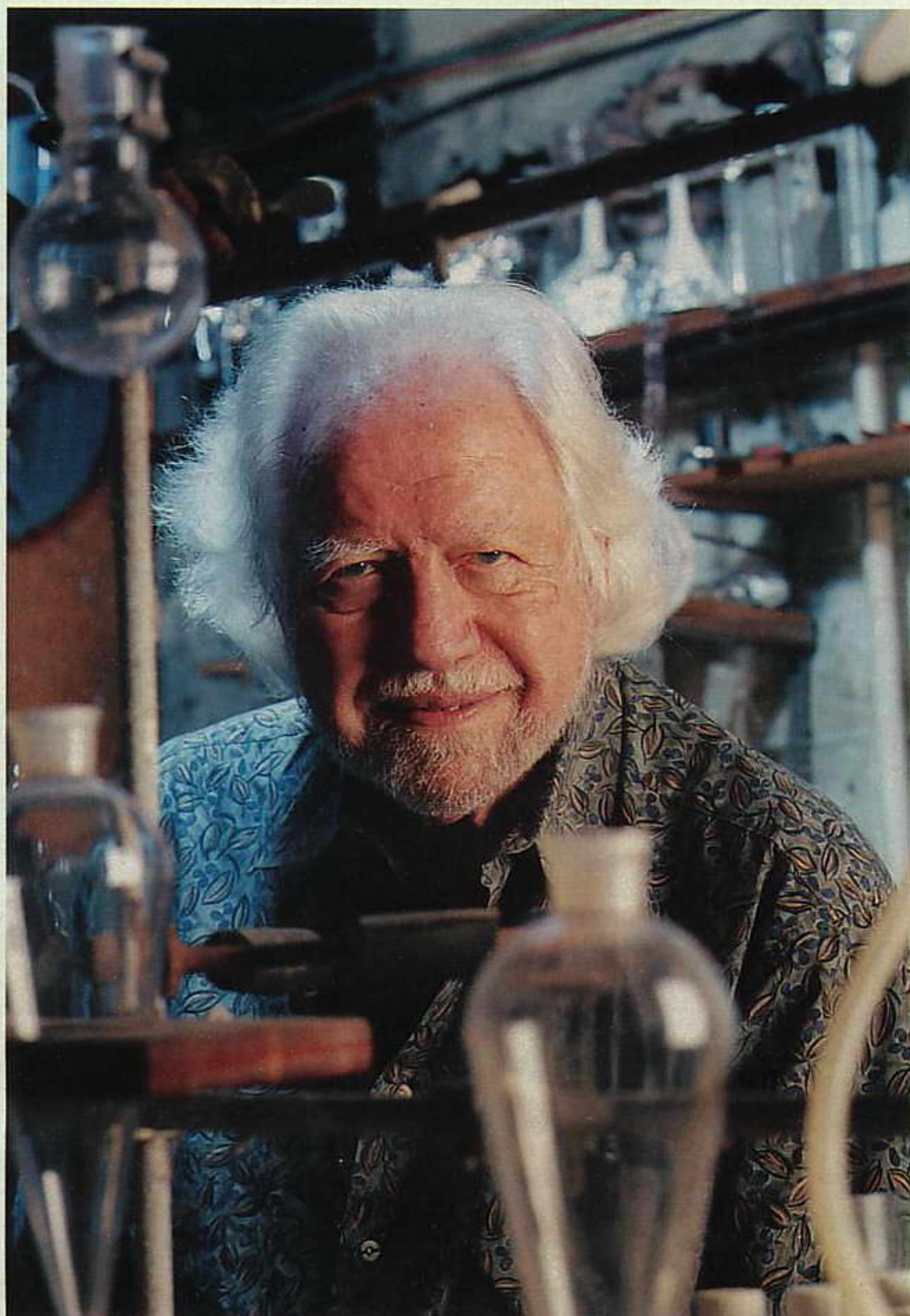
any crime. Instead, after an interrogation that lasted eight hours, one of the federal agents pulled from his jacket a worn copy of one of Shulgin's books and sheepishly asked for his autograph.

Shulgin signed it, "Sasha—good luck."

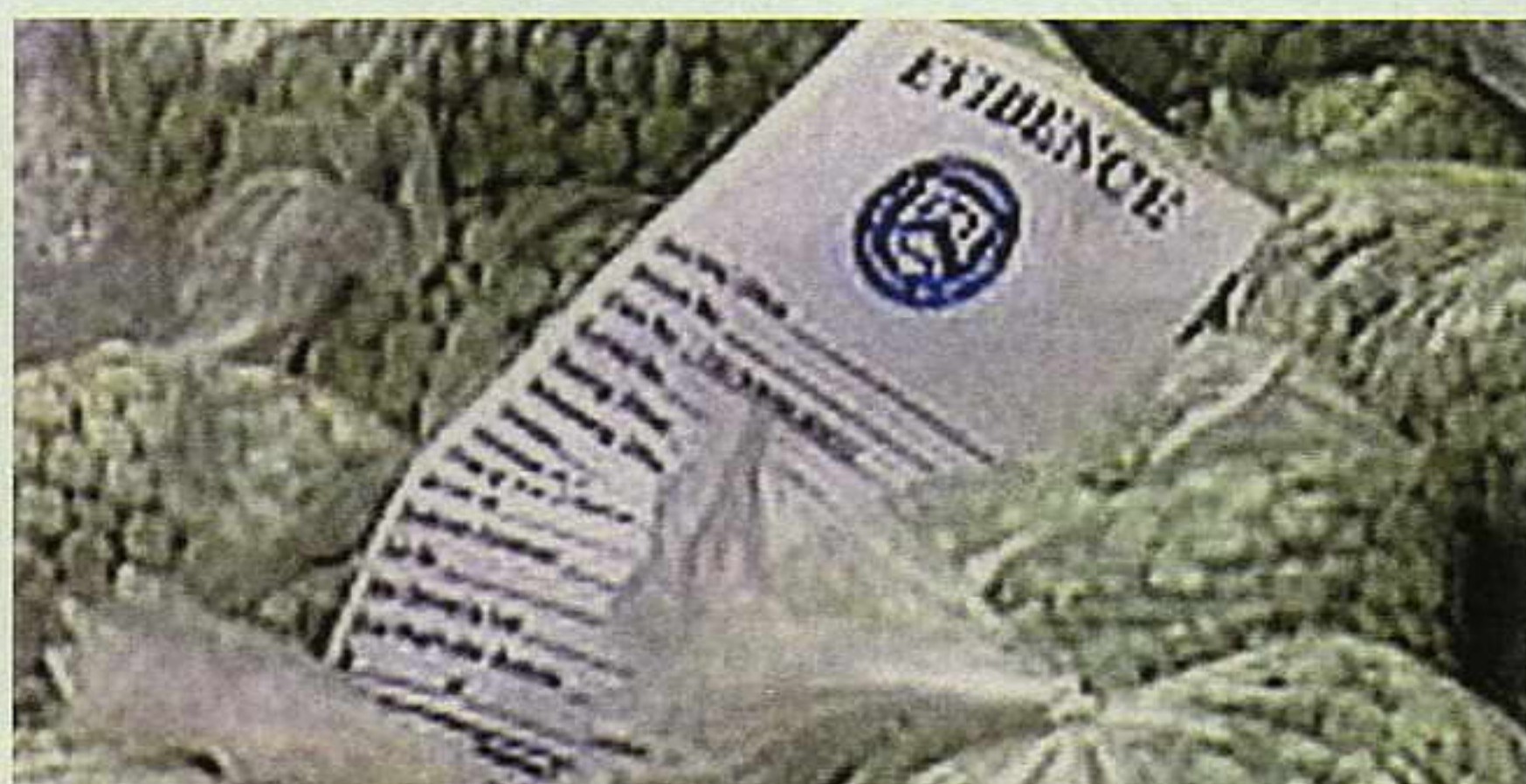
The invasion ended, Shulgin, the man who synthesized the compound known as MDMA and introduced it to a select group of medical professionals in the late 1970s, went back to work. "The government has what it wants," he told a conference of chemists soon after. "My laboratory will remain open."

Shulgin may be a stealth revolutionary, but he is not a raver (he hasn't, it is safe to say, had a pacifier in his mouth since infancy). Nor is he a hippie or a New Age guru. In fact, Shulgin is a brilliant academic with a fistful of patents and papers to his name, a former instructor at the University of California at Berkeley and a consultant for the National Institutes of Health, NASA and the Drug Enforcement Agency. He is a genial, cultured





Shulgin the master chemist in his lab, September 2003, left. In the 1970s he synthesized MDMA, making it available to therapists; it became known as the club drug ecstasy and was outlawed by the government in 1986.



grandfather who adores Mozart and psychedelics—and has devoted his life to proving that that's not as loopy as it sounds.

So talented a chemist is Shulgin, and so desperate was the government for his knowledge, that for 20 years he possessed a rare license to manufacture any illegal drug. But while working for the DEA and presenting himself as a friend of law enforcement, he quietly carried on a double life, leading a tiny underground movement that continued the radical psychedelic research of the 1960s. After nearly achieving the movement's goal of establishing MDMA as a psychotherapeutic medicine, Shulgin suffered a crushing defeat in the mid-1980s when MDMA, by then known as ecstasy, became an illegal street drug. His reputation destroyed, he was exiled to the margins of his field, where he labored on in private, inventing a dazzling variety of psychedelic drugs.

By now Shulgin has created more than 100 molecules that produce altered states of consciousness, new ways of thinking, feeling and seeing—making him a kind of Einstein of pharmacology, if not one of the most influential scientists of his time. But even today his work is virtually unknown outside a select West Coast circle. At the age of 78 Shulgin is a ghost to history, mentioned only in passing in a few articles and missing from the scholarly drug books, the result of a careful, lifelong avoidance of the mainstream press as well as a dose of government suppression. But in an era when psychopharmacology is reassessing its past and future, Shulgin's legacy is far from decided. In fact, his influence is growing.

THE TRUE BELIEVERS

There is no university lab, no corner office in a glass hospital tower. The world's leading psychedelic chemist lives on a tumbledown property in the hills of Contra Costa County, in a ranch house sewn together from a patchwork of materials and sinking into the sandy soil. Nearby, a rickety red barn collapses

in on itself by a pile of bricks and a sun-bleached pickup. The air is dry and hot, but the plantings that border the house bloom in intense, vivid reds and lush, bursting greens. Mount Diablo, brown under a cloudless sky, rises in the distance.

Shulgin is a mammoth old man, standing six-foot-four. Dressed in a faded Hawaiian shirt, khaki shorts and sandals, with a gray beard coiled around a broad jaw and silken white hair shooting off his head in every direction, he looks like a hippie Santa Claus. His blue-green eyes appear youthful; they shine with pleasure at our meeting on this Fourth of July, 2003. Grasping my outstretched hand in both of his, he greets me warmly with a broad smile. "Welcome, friend," he says.

Shulgin has thrown together a barbecue on the crumbling stone patio behind the house, and he introduces me to his friends, who are clustered in groups under a stand of trees and a patio umbrella, away from the brutal sun. He finds Ann, who is short, plump, gray-haired, obviously once gorgeous, draped in beads and Indian cloth, holding a pack of Capri Slims. She hugs me with motherly tenderness. Then Shulgin bends down to whisper in her ear, and she bursts out laughing like a little girl.

"Oh my, Sasha, you'd better not."

Twenty-four years ago on this day and on this very spot, he married her while his best friend, a high-ranking DEA official in charge of the agency's West Coast laboratories, served as minister. Ann and Sasha have one of the most unusual marriages on record, a union devoted to sex, drugs and the pursuit of advanced neurochemistry, which they've chronicled in two strange and enchanting books, *PIHKAL: A Chemical Love Story* and *TIHKAL: The Continuation*. (The titles are acronyms: "Phenethylamines I Have Known and Loved" and "Tryptamines I Have Known and Loved.") These volumes not only contain the tales of two lifetimes' worth of psychedelic experiences but also include the recipes so that any good chemist can make Shulgin's drugs. On their kitchen table the Shulgins

keep an index card inscribed with a quip from their old colleague Timothy Leary: "Psychedelic drugs inspire fear and panic in people who have never tried them."

Today's party is a typical Shulgin Fourth of July barbecue, the kind he has been throwing for decades. Freshly slaughtered lamb is being grilled over coals, and a handpicked dandelion-and-boysenberry salad is on the table. His guests are the usual crowd of Marin County progressives, upper-middle-class folkies with trimmed beards and Gore-Tex hiking shoes. They drive



"SASHA AND ANN [ABOVE, IN 1980] BECAME THE CORE OF THE PSYCHEDELIC COMMUNITY," SAYS RICK DOBLIN, A HARVARD-TRAINED RESEARCHER.

Subaru station wagons and eat organic food. Yet they are also fellow travelers in Shulgin's psychedelic revolution. That gentleman over there, flying high on peyote tea, his pupils reduced to pins, says he once supplied most of the West Coast's LSD. That bearded businessman covertly finances California's marijuana-buying clubs. The medical executive in shorts and a T-shirt has smuggled precursor chemicals for Shulgin. The state legislator, his face shaded by a broad-brimmed bush hat, has fought to keep Shulgin free.

"Sasha and Ann became the core around which the psychedelic community really cohered," says Rick Doblin, who has a doctorate from Harvard and is the head of the Multidisciplinary Association for Psychedelic Studies, a leading ecstasy advocacy group. "The Shulgins created the context for this whole community of people who really felt under attack in the wider culture."

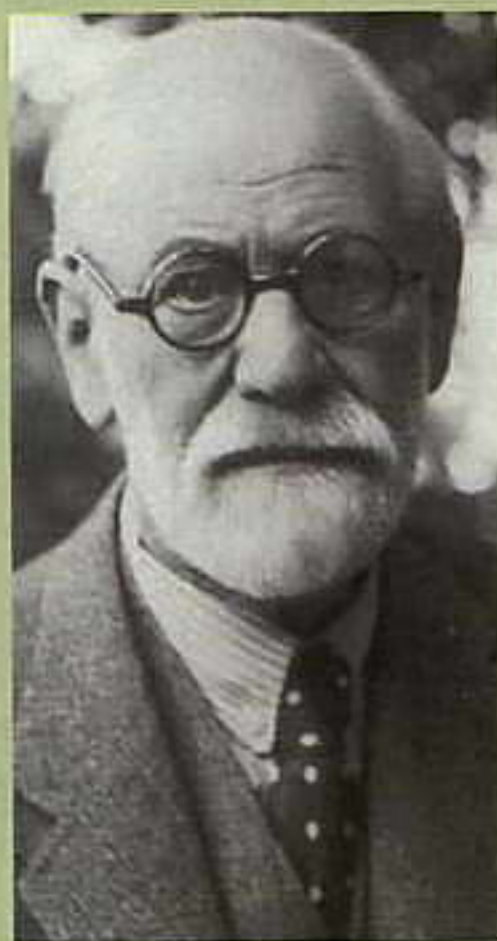
This elite community includes chairs of university departments, leading research scientists, an anthropologist, writers, M.D.'s, a research chemist and a wealthy entrepreneur. The most trusted among them are also members of Shulgin's "research group," a dozen or so volunteers who have met regularly for the past 30 years to be the first to road test hundreds of Shulgin's potent new drugs. Whenever he emerged from the lab clutching a promising variation of mescaline or LSD, Shulgin would gather the group and explain the basic chemistry and effects of his new molecule (for example, short, mild and emotional); then everyone would drink it down with a glass of juice and a notebook on hand to record the results while relaxing in some forest cabin, with a fire in the hearth and Bach on the five-channel home theater system.

These were effectively the drugs' first human trials, conducted outside the system of big science, without the red tape of a protocol from the Food and Drug Administration. Self-testing gave Shulgin the freedom to work without restriction but at some cost to himself. Over the years he has become violently ill, blacked out, lain shaking on the floor and felt his limbs freeze and his bones disintegrate. Still, he believes he is under an ethical imperative to sample his drugs before he gives them to anyone else—human or animal.

He invents new combinations routinely and names them as if they were children. Each inspires high hopes at birth, and though some have gone on to fulfill his dreams, several notable ones—such as ecstasy, STP, 2CT7, 2CB and foxy methoxy—have slipped from his grasp and out to the street, where they've thrived as party drugs. Shulgin has many other babies with startling effects, which remain known only to connoisseurs. Their ultimate fate—as outlawed party favors or the radiant

DRUG PIONEERS

FOUR MEN, FOUR SUBSTANCES, ONE OVERWHELMING DESIRE TO TURN ON THE WORLD



SIGMUND FREUD (1856–1939)

DRUG: Cocaine

HIGH POINT: Later celebrated for inventing psychoanalysis and describing the Oedipus complex, Freud actually gets his break with the publication of a journal piece, "On Cocaine," that advocates the drug's use as an antidepressant and suggests it might be useful as an aphrodisiac and a treatment for asthma.

COMEDOWN: Freud offers cocaine to a friend dying of morphine withdrawal, hoping it will numb the pain. It doesn't, and the friend dies slowly, with a new addiction.



R. GORDON WASSON (1898–1986)

DRUG: Psychedelic mushrooms

HIGH POINT: Wasson becomes the first white man known to experiment with mushrooms when he and a friend travel to a remote Mexican village in 1955 and hook up with shaman Maria Sabina. Wasson documents the experience in an article for *Life* magazine, with the stipulation that editors not change a word of his text.

COMEDOWN: The editors do write the title—"Seeking the Magic Mushroom"—and in so doing coin a phrase. To Wasson's chagrin, hippies and rock stars subsequently descend on Sabina's village to seek mushrooms for recreational use.



ALDOUS HUXLEY (1894–1963)

DRUG: Mescaline

HIGH POINT: After enjoying success with *Brave New World* (1932) and other novels, Huxley writes two books about his use of hallucinogens, *The Doors of Perception* (1954) and *Heaven and Hell* (1956). After reading the former, Jim Morrison decides to name his band the Doors.

COMEDOWN: The morning of his death, November 22, 1963 (remembered by most people as the day Kennedy is assassinated), his wife injects the cancer-stricken Huxley with 100 micrograms of LSD.



TIMOTHY LEARY (1920–1996)

DRUG: LSD

HIGH POINT: After his experiments with hallucinogens scuttle Leary's job as a Harvard professor, a benefactor sets him up in a mansion in Millbrook, New York. From there he publicly espouses the use of LSD by the masses as a cure for all modern ills. Richard Nixon calls him the "most dangerous man in America."

COMEDOWN: A 1970 pot bust derails his California gubernatorial campaign, but 18 months into his prison sentence Leary makes a daring escape. He surfaces in Algeria, then Switzerland, then Afghanistan, where feds nab him in 1973. After three years in California prisons, he walks in exchange for ratting on radicals who had helped him break out of jail. His son and his friends denounce him.



Shulgin at 30, when he worked for Dow (inset); in the U.S. Navy in 1943.

centers of a new age—lies beyond the master chemist's reach.

For now it is easy to see that the party guests revere the man they call Sasha as they take turns approaching him for an audience. (He responds with deft one-liners: "I think you mean the methylated tryptamine"; "Oscar Wilde once said....") Some of them are not afraid to share their respect with a reporter, like the man I meet by the buffet, a slim, bearded 50-something anesthesiologist in a black T-shirt. "I have so many questions for Sasha," he says, between forkfuls of salad. "This year I wrote them all down."

A few minutes later another bourgeois bohemian, wearing a faded tie-dyed shirt and a Breitling watch, asks for permission to videotape Shulgin working in the lab: "It would be so great just to get a few minutes, you know, of you working, because it's so incredible what you do." Shulgin nods. "Oh, yes," he says, "wonderful things happen in there." Then he touches the man fondly on the shoulder and waltzes away.

THE ART OF CHEMISTRY

Psychedelics are the most pharmacologically complex compounds known, and in the 20th century the labs that have

turned out new versions of them are few. They include the Sandoz Pharmaceutical laboratory in Vienna (LSD) and the lab in Alexander Shulgin's home. Shulgin has been working from home since 1967, when he walked away from corporate America after quitting a lucrative job at Dow Chemical to begin practicing his brand of alchemy. After nearly 40 years of combining his life with his chemistry, it is hard to tell where Shulgin's home ends and his lab begins.

The dining room is a nook stuffed with photographs of the Shulgins with counterculture icons, along with psychedelic knickknacks such as a ceramic toadstool and drug posters from Amsterdam. This is where Shulgin brainstorms new molecular structures on a yellow legal pad, usually after a bottle or more of a syrah crafted to his taste by a true believer who owns a boutique winery (the bottle is labeled SHULGIN: WILD AND SASSY). Then Shulgin will take a few steps, duck his enormous head under the door frame and enter a book-lined study to check his chemistry reference texts. If all goes well there, he heads outside and down a winding dirt path, overgrown with psychoactive plants and vines, that leads to the backyard shed, the "wet lab," where he can lose himself for hours and where the real work gets done.

It is a dark, loamy place, one step removed from a state of nature, with a dirt floor strewn with leaves. Ropy cobwebs hang from the ceiling to the floor (Shulgin believes it is immoral to kill spiders). The thick wooden tables, grooved and burned by acids, hold a few feet of plastic tubing, some vials and a Bunsen burner. Shulgin closes the door and sinks down onto a stool. "This is all I need," he says expansively, gesturing to the low-tech equipment. "Everything I need."

He slides open a drawer full of shiny glass beakers and then runs his fingers lightly across them, as if he were touching a collection of the finest sterling silver. In a light, airy tone he explains that he has recently been working on cactus compounds, which he extracts by cutting the thorns with a nail clipper and pulping the plant in a blender.

He talks about his process. He orders pure serotonin, the chemical that many antidepressants boost to improve mood, from a chemistry supplier in Japan for about \$8 a gram. Speaking as if we were ensconced (continued on page 88)

FEDS AND HEADS

A LEGAL HISTORY OF FOUR COMMON SUBSTANCES



ECSTASY (MDMA)

CREATION: First synthesized by a German chemical company in 1912, it was intended as a diet pill. During the 1970s Shulgin leads the way in rediscovering the drug and experimenting with it as a psychiatric tool. MDMA finds advocates in the psychotherapy community, but its medical use is eclipsed by club use.

CRIMINALIZATION: MDMA enters the popular consciousness not through hospitals but through dance clubs, and in 1986—after becoming ubiquitous in clubland—ecstasy is banned when the Controlled Substances Act rules it a Schedule I drug.



HEROIN

CREATION: Derived from morphine, heroin is invented in 1874 by chemist C.R. Alder Wright at St. Mary's Hospital in London. In 1897 the Bayer pharmaceutical company begins to mass-produce it as a treatment for respiratory ailments, for which it is widely used in the U.S. during the early 20th century.

CRIMINALIZATION: Pharmacists note addictive qualities similar to those of morphine. In 1914 the Harrison Narcotics Act deems heroin a controlled substance and imposes a tax on it. Ten years later the Heroin Act passes, making the drug illegal to possess or manufacture.



GHB (GAMMA HYDROXYBUTYRATE)

CREATION: GHB, which is produced naturally in the human body, is synthesized in the 1920s. By the late 1950s French doctors are employing it as an anesthetic. In the 1980s bodybuilders turn to it to promote weight loss and muscle growth simultaneously.

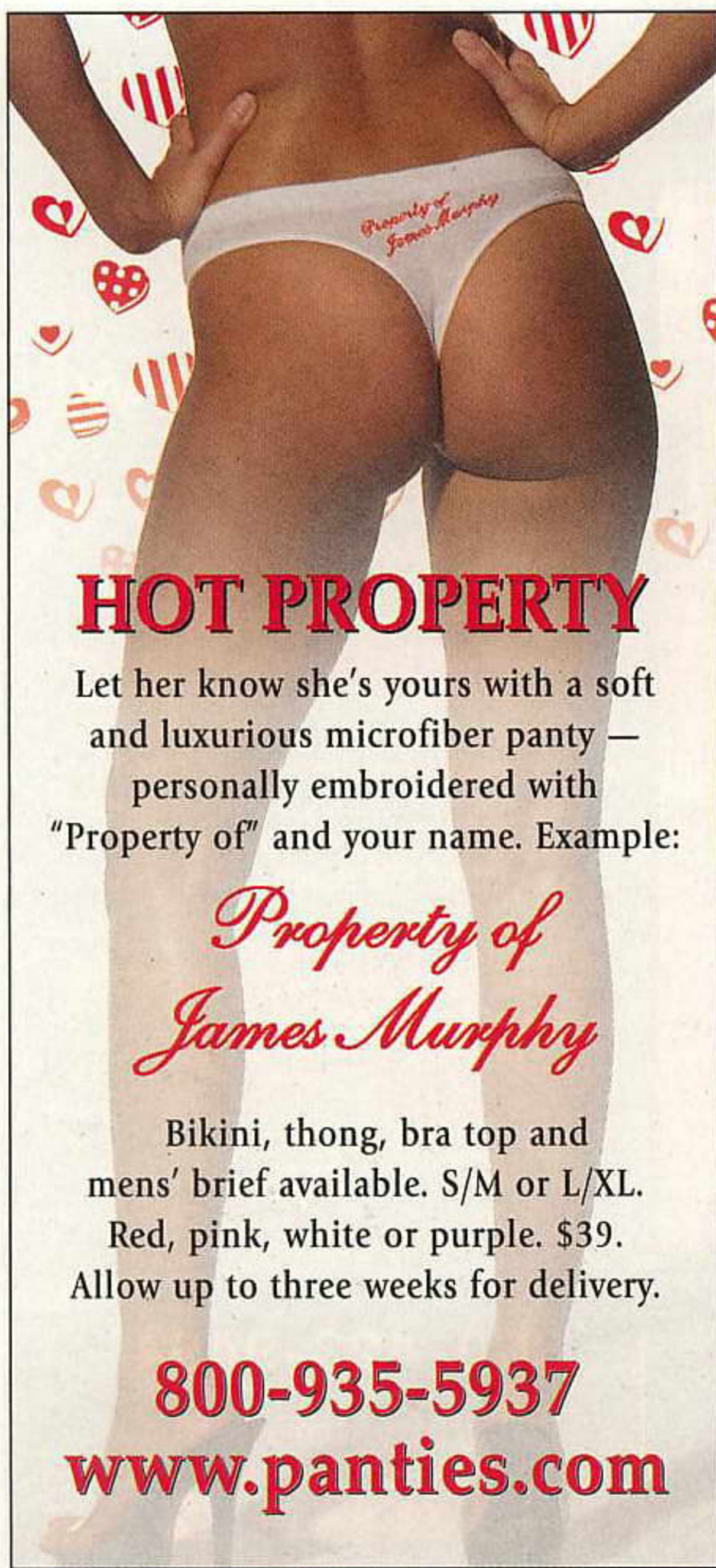
CRIMINALIZATION: Users find that it induces hallucinations and sleeplike symptoms. The FDA bans GHB in 1990, saying it can cause death when mixed with alcohol. Still used by European doctors, it's made a Schedule I controlled substance here in March 2000.



LSD (LYSERGIC ACID DIETHYLAMIDE)

CREATION: Commonly known as acid, the drug is first synthesized in 1938 by Albert Hofmann while he's working for Sandoz Pharmaceuticals in Switzerland. On April 16, 1943 Hofmann inadvertently doses himself and reports "an uninterrupted stream of fantastic pictures."

CRIMINALIZATION: Dr. Max Rinkel introduces LSD to the U.S. in 1949; Congress limits LSD research in 1962. In 1970 the Comprehensive Drug Abuse Prevention and Control Act and the subsequent Controlled Substance Act put the drug on Schedule I, making it illegal.



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SHULGIN

(continued from page 88)

of fun with why, when I was older, I built three basements in my house."

His first basement chemistry set had only bicarbonate of soda and dilute acetic acid. He accumulated more powders and liquids and mixed them into messes that fizzed and changed colors. Chemistry became his thing, his outlet, and by the time he went to Harvard—on a full scholarship at 16—he was sufficiently advanced in it to use it to express himself. Intimidated by Ivy League regality, Shulgin conveyed his discomfort by allowing a gooey batch of mercuric acetate to dry on his dorm windowsills. When it hardened, it exploded, sending shattered glass into the yard. "It was an accident," he says now, with an amused smile. "Just an experiment." Then he adds, as if to reassure me, "I replaced the windows."

When America entered World War II, Shulgin happily dropped out of Harvard and joined the Navy. In his ship's bunk he memorized a favorite chemistry textbook, and by the time the war was over he was prepared for a Ph.D. in biochemistry at Berkeley, followed by marriage (his first wife, Nina, died 30 years later) and a job at Dow Chemical. He immediately proved himself a wizard. Told to find a way to deal with the company's excess inventory, he scribbled a formula on the back of an envelope. "I told them, 'If you put a phosphate down here and put a carbonate up there, you have a physostigmine,'" he says. His supervisors asked what that was. Shulgin told them he was pretty sure it was the world's first biodegradable pesticide.

Dow made a fortune on the pesticide (it spawned an entire line that is still in use), and as a reward Shulgin was given a lab and the freedom to do whatever he wanted. "So," he says, laughing, "I went into psychedelics."

The chemist became a convert after his first mescaline trip—on 400 milligrams, a massive dose. Emotional doors that had been locked his entire adult life swung open, and he felt showered with passion. "I saw a world that presented itself in several guises," he wrote. "It had a marvel of color that for me was without precedent.... I could see the intimate structure of a bee putting something in its sack on its hind leg to take to its hive, yet I was completely at peace with the bee's closeness to my face.... I had found my learning path."

Awed by his ability to be awed and left with "a burning desire to explain its profound action to myself and to the rest of mankind," Shulgin resolved to spend the rest of his career exploring psychedelics. Thus he would begin his double life, presenting himself as sympathetic to law enforcement, with low regard for street drugs but convinced that his

beloved psychedelics were a "family that must stand apart."

THE LAW OF UNINTENDED CONSEQUENCES

Shulgin was not alone. The 1950s were a golden age in psychedelic studies. Aldous Huxley published *The Doors of Perception* and argued that mescaline could open an educated, sensitive mind to "love as the primary and fundamental cosmic fact." Artists and intellectuals like Shulgin took to Huxley enthusiastically. In drawing rooms and Beverly Hills doctors' offices, celebrities such as Cary Grant, Jack Nicholson and Esther Williams were experimenting, and Shulgin decided to join them with his own "mescaline studies."

At the same time, psychedelics were all the rage in therapeutic circles. At the Boston Psychopathic Hospital, doctors were looking into a bewitching new chemical, LSD, as a means to "elicit release of repressed material" into consciousness (they also investigated LSD as a truth serum for the CIA). Hundreds of other LSD clinical trials were under way, sponsored by the National Institutes of Mental Health. "These people were in no sense cultural rebels," says Dr. Lester Grinspoon, a noted Harvard University drug historian. "It's a nearly forgotten chapter in American psychiatry."

In the late 1960s, psychedelics—linked to Golden Gate Bridge suicides, Timothy Leary and the counterculture—became politically fraught, and scientific support for their study melted away. LSD was outlawed, and the FDA began denying research requests for LSD and mescaline, ending the prolific decade. Even chemists who had bet their careers on psychedelics moved on, but Shulgin never left his learning path, and he was soon the leading member of a once vibrant field.

He dealt with the FDA ban by making "designer drugs" that skirted the legal definition of a psychedelic. He described his new drugs in a steady stream of journal articles—such as "Role of 3,4-dimethoxyphenethylamin in Schizophrenia" in *Nature*—intended not for a mass audience but to keep the scientific ball rolling in a time of government hostility. Dr. Charles Grob, director of the child psychiatry department at UCLA Hospital, says, "Sasha is a scientist, and he gave the studies credibility. He carried the torch. Because of that he may one day be perceived—rightly, I think—as the father of an entire field of psychedelic medicine."

In 1967 Shulgin had his first brush with the unintended consequences of his imagination. An ultrapotent second-generation analog of mescaline, a drug he called DOM, became known on the street as STP (serenity, tranquility, peace), and a drug epidemic tore through San Francisco. STP was sold in tabs that were four times stronger than the safe dose, and thousands of people who took it ended up in emergency rooms, hallucinating uncontrollably. "Maybe it became

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known from a seminar I gave at Johns Hopkins," Shulgin wrote in his only public comment on the DOM disaster. "Maybe the patents had been read."

On July 5 the Shulgins stay home to relax, recover and avoid the sun on a day when the heat rises from the earth in visible waves. Sasha and Ann do not have the means to install air-conditioning; he gets by on a small allowance from leasing land on his property (which his father bought in the 1930s) for a cell phone antenna, and along with his Social Security and his book sales (he distributes through Amazon.com) he makes enough to keep content. Ann, however, allows that she wouldn't mind cash to repair the kitchen linoleum where it has worn down to the bare wood planks. "Sasha told me in the beginning that he never planned to make money from his inventions," says Ann. "That was fine with me, but a little bit would be nice. It's a very old house."

Shulgin has already checked into the lab, having risen at seven in the morning, and when he meets me at the door he is wide awake and wearing his uniform: open shirt, shorts and sandals. These sandals—black custom-made jobs in the Birkenstock style—are practically stitched to Shulgin's feet; they look like they haven't been removed since the Summer of Love. He was wearing sandals on his wedding day and wore them with his tuxedo when he received a plaque from the Department of Justice (for his "significant personal efforts to help eliminate drug abuse"), and he sure is wearing them today. Of course, he has a theory for footwear: "I discovered that fungus is unable to grow on my feet if I wear sandals."

Ann is sitting in her usual chair by the screen door, looking perfectly at ease, smoking and fanning herself with a folded magazine. "Psychedelics are extraordinarily wonderful for another thing: love-making," she says, abruptly yet casually. "You know, as you get older you find there is more than the penetrative, pounding type of sex. And you can have a spiritual experience making love."

A low sound escapes my lips as I consider continuing the conversation, then I decide I'm not that liberated. Reading *PIHKAL* and *TIHKAL*, I'd already come across several testimonies to the power of psychedelic sex. "The Bach was a moving thread of silver against a background of blue and orange," begins a typical passage. "I opened my eyes for a second to see [his] head rising from the pillow as his body strained against the ropes."

So it seems that Sasha and Ann are not simply married but delightfully married. Sasha has found his natural earth goddess, a bundle of loving energy he calls kiddo. As for Ann, she calls her husband her "big, beautiful man" or her "white-haired magician." She drops her voice, speaking with the cool precision she

learned as a medical transcriber. "For months he is absorbed in cactuses, and there are cactuses lying all over the house," she says. "Then he gets onto tryptamines, and I can tell you it's damn impossible to get him to go back to the cactuses." Her eyebrows arch. "What could be more exciting than constant change?"

It is an interesting question, given that one constant in the Shulgins' lives has been their ingestion of massive amounts of psychedelic drugs, a total that easily numbers in the tens of thousands of trips. Feeling "disorientated" in Aachen, Germany, where they had gone to attend a conference on nuclear medicine, they took 30 milligrams of an "erotic enhancer" they called 2CB and made love in the hotel room. In Lourdes, France Ann explored caves under the sway of ecstasy. Back home they packed a mushroom analog Sasha had synthesized and visited so-called energy centers such as Death Valley. When Sasha asked Ann to move in with him, they were both on LSD.

Sometimes, as in the case of Shulgin's first brush with a high dose of a drug they call "the teacher," a vigorous psychedelic that makes LSD look like a multivitamin, his journal records less than blissful reactions: "Am scared shitless.... Am I catalytically fixed...? I see myself dying," he wrote. He imagined himself as a very old man lying on the floor, his body wasting away to bone. But he refuses to linger on that awful image, with its echo of his childhood pet, dismissing it as a "nihilist illusion" and retreating to a discussion of the shape of the molecule.

His most visionary experience was itself a reflection of his obsession with structure and form. He had swallowed some strongly hallucinogenic ALEPH compounds and was walking in his garden when he saw the hose tangled in a giant knot. In a blink, without thinking, he untangled it mentally. All at once he saw how to make the hose flat and straight. Just as easily, he could retangle it. "I thought, Is this bliss?" he says, the memory still vivid. "And right then I wanted to go inside to the dictionary and look up the definition of bliss."

SASHA'S SECOND DRINK

Shulgin did not immediately recognize that MDMA would change his life—and society. He initially thought it was no more nuanced than gin. After his first experience in the early 1970s—the compound had been buried in reference books since 1912 but never discussed as psychoactive—he described a "mild, pleasant intoxication." It produced "free-flowing feelings" that he likened to "the second martini." Believing he had indeed found a synthetic alternative to alcohol, Shulgin brought it to parties, holding up a little baggie of white powder he called "a low-calorie martini."

Testing among his research group, however, revealed the full range of

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warmth and euphoria of the MDMA high. Less cosmic and more personal than LSD, it evoked in most people feelings of empathy and self-acceptance rather than the sometimes bewildering encounter with infinity that is characteristic of acid. From the perspective of drug-assisted psychotherapy, it would be a safer choice than LSD, which was too strong for the "drug-naïve." Arriving on the scene as it did in the drug-tolerant atmosphere of the 1970s, a time when the Carter administration was talking openly about decriminalizing marijuana, MDMA seemed to Shulgin's group to be a drug that could revive the spirited

research of the 1950s. They lovingly nicknamed it "empathy" and thought of it as "penicillin for the soul."

Shulgin started sharing his gentle new compound with people outside his research group; one person he gave it to was his friend and famous predecessor, the Austrian scientist Albert Hofmann, who is known for synthesizing LSD in 1938 (Hofmann also wanted to market LSD in low doses as an antidepressant). "They talked about this connection between atomic energy and psychedelic energy," says Doblin, who was present for the session. "They felt that the chemicals were an antidote—through the de-

velopment of consciousness—to handle the destructive energies." After hours of this kind of conversation, Shulgin asked Hofmann what he thought of MDMA. Hofmann replied, "Finally, something I can do with my wife."

By the late 1970s, a time of promise for the true believers, Shulgin's establishment credentials were impeccable. He appeared at drug criminals' trials and gave expert testimony for the prosecution. He didn't mind helping the government put amphetamine or cocaine dealers in jail. Those drugs were "false in some way," he says. "The sense of power they give is not real." They were only marginally better than marijuana—in his opinion "a complete waste of time."

He was also a lecturer at Berkeley, a consultant to the DEA and a member of the Bohemian Club, one of America's most elite organizations. Every Republican president since Calvin Coolidge—along with America's top CEOs and media moguls—has been a member of the all-male fraternity, which meets once a year for a secretive two-week bacchanal in the California redwoods. "Sasha is very intentional about his friendships," says Doblin. "He has tripped out with those captains of industry. So if you want to know why he got raided and not arrested, I think that's the answer."

Shulgin staked his reputation on ecstasy, seeding it in a community of New Age and Jungian analysts on the West Coast while recruiting highly placed professionals he hoped would testify for it when the inevitable confrontation with the government came. By the early 1980s an estimated 1,000 therapists were doing five-hour MDMA sessions with their patients.

Then, a hippie nightclub owner in Texas broke ranks and began selling it. He renamed MDMA ecstasy, beginning the rebranding that led to a giant criminal market for Shulgin's drug. "Yeah, the first dealers came right out of the movement. They were a breakaway branch," Doblin says. "But it could have been worse. We actually talked them out of marketing 2CB, another Sasha invention, which is much stronger and more psychedelic and really would not have been right for people to be taking in nightclubs."

By the time the government announced plans to add ecstasy to the Controlled Substances Act, Shulgin and his circle were confident that they had laid the groundwork to keep it in the hands of doctors. "We were optimistic," recalls Doblin. "It wasn't as strong as LSD, so the abuse profile was better, and here you had this record of its being used in a therapeutic context."

On August 24, 1984 Shulgin wrote to his old friends at the DEA to say that MDMA, because of its "medical utility," ought to be placed under the less restrictive Schedule III, so that research could



"First of all, George, you're too old to have an imaginary friend. And second, I don't think she's imaginary!"

WHERE &

HOW TO BUY

Below is a list of retailers and manufacturers you can contact for information on where to find this month's merchandise. To buy the apparel and equipment shown on pages 39, 45-46, 104-111 and 167, check the listings below to find the stores nearest you.



GAMES

Page 39: *EA Games*, 877-324-2637 or ea.com. *Konami*, konami.com/lifeline. *LucasArts*, lucasarts.com. *Midway Games*, midway.com. *Sammy Studios*, sammystudios.com. *Sony*, playstation.com. **Wired: Altec Lansing**, store.apple.com.

MANTRACK

Pages 45-46: *F.M. Allen*, fmallen.com. *Harvard Common Press*, harvardcommonpress.com. *Morgan Aero 8*, from *Isis Imports*, morgan-cars-usa.com. *Sony*, sony.com.

STRONG SUITS

Pages 104-111: *Borrelli*, luigiborrelli.com. *Boss Hugo Boss*, hugo.com. *Bottega Veneta*, bottega-veneta.com. *Brioni*, brioni.it. *Calvin Klein Collection*, 212-292-

9000. *Charvet*, available at *Bergdorf Goodman*, 212-753-7300. *Country Gentleman*, countrygentleman.com. *D&G*, 212-965-8000. *Etro*, etro.it. *Frédéric Fekkai*, fredericfek kai.com. *GF Ferré*, gianfrancoferre.com. *John Richmond*, 212-246-6724. *Johnston & Murphy*, johnston-murphy.com. *Kiton*, kiton.it. *La Perla*, laperla.com. *La Petite Coquette*, 212-473-2478. *Lorenzini*, lorenzini.it. *Lubiam*, lubiam.it. *Michael Kors*, 212-452-4685. *Stuart Weitzman*, stuartweitzman.com. *Ted Baker London*, tedbaker.co.uk. *Tommy Bahama*, tommybahama.com. *Vestimenta*, available at *Barneys New York*. *Zang Toi*, 212-757-1200.

ON THE SCENE

Page 167: *Cold Steel*, 800-255-4716 or coldsteel.com. *Colorado Boomerangs*, 800-35-RANGS or coloradoboomerangs.com. *Dragon Knives*, from the Great Throwzini, throwzini.com. *Horizon Darts*, 800-542-3278. *The Oriental Gifts*, 312-663-0304.

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continue and doctors could be permitted to prescribe it. "I have been in direct communication with perhaps a score of physicians who have become sufficiently impressed with the value and safety of MDMA to have built much of their psychiatric practice about its use," he wrote.

After hearings that lasted two years and included mountains of testimony, the DEA's chief administrative judge, Justice Francis Young, agreed that MDMA should be placed under Schedule III. But a month later the head of the DEA, John Lawn, a Reagan appointee, overruled his own judge and placed ecstasy under Schedule I. "It was the first clandestinely manufactured designer drug that got itself a lawyer and gathered so-called experts on the subject," a DEA official later said.

Dr. Grinspoon, the Harvard drug historian, won a case against the DEA in federal court on the grounds that the administrator had improperly ignored MDMA's medical potential. But Lawn rescheduled it under a new rationale, and this time the ban held. In 1986 Congress passed the Analog Act, which outlawed newly created drugs if they resembled the chemical structure of a scheduled drug. Two years later Shulgin tried to firm up his establishment credentials. He wrote *Controlled Substances: A Chemical and Legal Guide to Federal Drug Laws*, which became a standard reference for DEA officials.

The book was too late, however, and Shulgin paid a heavy professional price for his advocacy. As ecstasy spread to raves and the headlines carried stories of drug overdoses, Shulgin's reputation plummeted. The DEA blacklisted him with chemical supply houses. "They can do that quite easily," he says. In the late 1980s Shulgin found that his papers were no longer being accepted for publication. "The journals started getting cold feet," says Ann. "There was this reluctance to continue to publish Sasha's work. I don't think anything was turned down, but little notes came from their lawyers saying, 'We don't know if we can keep on.' Deep down, the DEA wants us dead."

Cocooned in their Contra Costa hideaway as ecstasy burned through the national consciousness, Sasha began to see a future in which the knowledge of his other beloved molecules' existence died with him.

In 1991 he decided his only option was to self-publish. "The only reason we published *PIHKAL*," says Ann, "is that the journals were unavailable." After self-publishing the book, with its recipes for making psychedelics, he sent it out with a cover letter to his friends in the DEA. "This might interest you," he wrote. It did. Three years later the government reached out from Washington and raided his house. What followed were allegations that Shulgin had violated the technical terms of his license, a case

he settled by paying a \$25,000 fine—and surrendering his license.

Dr. Grob of UCLA, a supporter, says, "When MDMA was scheduled, it really crushed Sasha. I don't think he's ever recovered from the humiliation."

THE CHEMICAL BOND

Come afternoon, it is still sauna-hot in the hills, and the Shulgins are sitting on the patio, making the most of a pathetic breeze. On occasions like these, Shulgin is not without his black moods. "The association with mental health has not been particularly useful or fruitful," he admits, with sadness in his voice. He'll let you know in so many words that he—like the DEA—understands that when drugs react with the general public, chaos can ensue. "Most people who take psychedelics just want to have a fun Saturday night," he says. "They wouldn't

dream of getting anything more than that." At one point he dismisses his life's work to me as making "baubles to put on the mantelpiece."

I want to know what the Shulgins think about MDMA's transformation into ecstasy and its devolution from medicine to club drug. Ann replies with a sigh, "Everybody asks about MDMA. It's really become quite annoying, actually, because, you know, for us ecstasy is sort of old news." After a few minutes I manage to ask Shulgin if he has anything to add. His normally cheerful visage darkens, and he retreats for a moment into silence. "It was very sad," he says at last, "very bitter." Then he turns back to me and smiles wearily. He is getting tired, he says, and politely excuses himself from the table.

Exiled by his government, shunned by the medical establishment and working alone in primitive conditions, Shulgin

has never idled his scientific curiosity, nor has he given up hope. In 1992, two years before the DEA raid, there was another effort to see ecstasy rescheduled so that research could continue. At a review convened by the National Institute on Drug Abuse, expert witnesses testified that not enough was known about the compound's toxicity to justify clinical trials. Shulgin rose to speak. In his warm, kindly voice he corrected them, noting that, in fact, human trials had been conducted by the Alexander Shulgin Research Institute. He added that these trials had produced very satisfactory results, which he would happily make available to anyone. "Basically what he was saying was that he had illegally conducted this research and here was the result," says Doblin. "It was incredibly brave, and it totally changed the tenor of the meeting."

Shulgin did not wait for the government to reconsider; in 1997 he and Ann published their second volume, *TIHKAL: The Continuation*, which lists more than a hundred new compounds that he had discovered and analyzed. He plans to publish again in the near future. Already, his last-ditch attempt is showing signs of having been ahead of its time. The most vocal critic of ecstasy, Dr. George Ricaurte, a Johns Hopkins scientist, has recently come under heavy fire for shoddy science. His studies, purporting to show that a single dose of ecstasy can burn a hole in brain tissue, are being repudiated as deeply flawed. At the same time, the FDA has approved clinical trials to administer ecstasy to post-traumatic stress disorder patients who are coping with anxiety.

For his part, Shulgin is no longer calling his compounds psychedelics. His latest molecules are better described as antidepressants, he says, and he has nothing left to do but continue to develop them.

Well after midnight on a recent evening, he gets into his Geo and drives down the mountain roads, past the Berkeley campus and over the bridge and the dark bay to a hospital near San Francisco. He is not thinking about ecstasy or any of the other drugs that have passed through his life and his body. As the world still grapples with his previous inventions, he forges forward.

In the predawn hours, when the sky is lightening to pink and the hospital's halls echo with his footsteps, Shulgin slips into a high-tech lab—he is friends, of course, with the doctor in charge. As always, he works by himself, surrounded by his potions and powders. And sometimes, when he's lost in the bliss of creation, he'll feel the atoms like living beings. Sure, it's just carbon, hydrogen, matter and electricity, but it's everything—*everything*—to a chemist alone in a laboratory at five A.M. willing to be awed.

